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| **Module** | **Lessons** | **Vocab and Tools** | **Standards** |
| Expressions and Equations (Module 4)  Expressions and Equations (Module 4) | 1: The Relationship of Addition and Subtraction  3: The Relationship of Multiplication and Addition  5: Exponents  6: The Order of Operations  7: Replacing Letters With Numbers  8: Replacing Numbers With Letters  9: Writing Addition and Subtraction Expressions  10: Rewriting Multiplication Expressions  11: Factoring Expressions  12: Distributing Expressions  13: Writing Division Expressions  14: Writing Division Expressions  15: Read Expressions in Which Letters Stand for Numbers  16: Write Expressions in Which Letters Stand for Numbers  17: Write Expressions in Which Letters Stand for Numbers  18: Writing and Evaluating Expressions – Addition and Subtraction  19: Substituting to Evaluation Addition and Subtraction Expressions  20: Writing and Evaluating Expressions – Multiplication and Division  21: Writing and Evaluating Expressions – Multiplication and Addition  23: True and False Number Sentences  24: True and False Number Sentences  25: Finding Solutions to Make Equations True  26: One Step Equations – Addition and Subtraction  27: One Step Equations – Muliplication and Division  31: Problems in Mathematical Terms  32: Multi-Step Problems in the Real World  33: From Equations to Inequalities  34: Writing and Graphing Inequalities in Real World Problems  **Assessment** | New or Recently Introduced Terms  **Equation** (An *equation* is a statement of equality between two expressions.)  **Equivalent Expressions** (Two simple expressions are *equivalent* if both evaluate to the same number for every substitution of numbers into all the letters in both expressions.)  **Exponential Notation for Whole Number Exponents** (Let be a non-zero whole number.  For any number we define to be the product of factors of i.e., . The number is called the *base,* and  is called the *exponent,* or *power* of .)  **Linear Expression** (A *linear expression* is a product of two simple expressions where only one of the simple expressions has letters and only one letter in each term of that expression or sums and/or differences of such products.)  **Simple Expression** (A *simple expression* is a number, a letter that represents a number, a product whose factors are either numbers or letters involving whole number exponents, or sums and/or differences of such products.  Each product in a simple expression is called a *term*, and the evaluation of the numbers in the product is called the *coefficient of the term.*)  **Truth Values of a Number Sentence** (A number sentence is said to be *true* if both numerical expressions are equivalent; it is said to be *false* otherwise.  *True* and *false* are called *truth values*.)  Familiar Terms and Symbols[[1]](#footnote-1)  Distribute  Expand  Factor  Number Sentence  Product  Properties of Operations (distributive, commutative, associative)  Quotient  Sum  Term  True or False Number Sentence  Variable or Unknown Number  **Suggested Tools and Representations**  Bar model  Geometric figures  Protractors | 6.EE.A.1 - Write and evaluate numeric expressions involving whole-number exponents.  6.EE.A. 6.EE.A.2 - Write, read, and evaluate expressions in which letters stand for numbers  a. Write expressions that record operations with numbers and with letters standing for numbers. *For example, express the calculation “Subtract from ” as .*  b. Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity. *For example, describe the expression as a product of two factors; view as both a single entity and a sum of two terms.*  c. Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations). *For example, use the formulas and to find the volume and surface area of a cube with sides of length*  6.EE.A.3 - Apply the properties of operations to generate equivalent expressions. *For example, apply the distributive property to the expression to produce the equivalent expression ; apply the distributive property to the expression to produce the equivalent expression ; apply properties of operations to to produce the equivalent expression*  6.EE.A.4 - Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them). *For example, the expressions and are equivalent because they name the same number regardless of which number stands for*  6.EE.B.5 - Understand solving an equation or inequality as a process of answering a question; which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.  6.EE.B.6 - Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, any number in a specified set.  6.EE.B.7 - Solve real-world and mathematical problems by writing and solving equations in the form and for cases in which *,*  and are all nonnegative rational numbers.  6.EE.B.8 - Write an inequality of the form or to represent a constraint or condition in a real-world mathematical problem. Recognize that inequalities of the form or have infinitely many solutions; represent solutions of such inequalities on number line diagrams.  6.EE.C.9 - Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. *For example, in a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation to represent the relationship between distance and time* |

1. [↑](#footnote-ref-1)